



(541) 383-9310 FAX 382-7588

Work Order #: M1 08009

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PAGE OF



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7 December, 2001

Anne Kranawetter
Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are the results of analyses for samples received by the laboratory on 08/05/01 14:47. If you have any questions concerning this report, please feel free to contact me.

This report was recreated from a previously issued final report in order to provide an electronic copy. The final report used for these electronic copies may have been previously issued as an amended report due to client requested changes to sample names, etc. No data has changed since submission of the previously issued final, or amended, report.

Sincerely,

Stephen Wilson
Environmental Group Leader

Work Orders included in this report:

M108009



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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01AMHV412SL	M108009-01	Soil	08/05/01 13:55	08/05/01 14:47
01AMHV413SL	M108009-02	Soil	08/05/01 14:00	08/05/01 14:47
01AMHV414SL	M108009-03	Soil	08/05/01 14:05	08/05/01 14:47
01AMHV415SL	M108009-04	Soil	08/05/01 14:10	08/05/01 14:47
01AMHV416SL	M108009-05	Soil	08/05/01 14:15	08/05/01 14:47
01AMHV417SL	M108009-06	Soil	08/05/01 14:20	08/05/01 14:47
01AMHV418SL	M108009-07	Soil	08/05/01 14:25	08/05/01 14:47

C. O. C. # 206

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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Environmental Laboratory Network

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Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

Gasoline Range Organics (n-Hexane to <n-Decane) per AK101
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMHV412SL (M108009-01) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	ND	12.6	mg/kg dry	50	AK 101	08/06/01	08/06/01	0108017	
<i>Surr: 4-BFB (FID)</i>	87.1 %	50-150							
01AMHV413SL (M108009-02) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	ND	12.9	mg/kg dry	50	AK 101	08/06/01	08/06/01	0108017	
<i>Surr: 4-BFB (FID)</i>	88.2 %	50-150							
01AMHV414SL (M108009-03) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	ND	14.2	mg/kg dry	50	AK 101	08/06/01	08/06/01	0108017	
<i>Surr: 4-BFB (FID)</i>	90.1 %	50-150							
01AMHV415SL (M108009-04) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	ND	6.80	mg/kg dry	50	AK 101	08/06/01	08/06/01	0108017	
<i>Surr: 4-BFB (FID)</i>	88.3 %	50-150							
01AMHV416SL (M108009-05) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	ND	10.9	mg/kg dry	50	AK 101	08/06/01	08/06/01	0108017	
<i>Surr: 4-BFB (FID)</i>	89.3 %	50-150							
01AMHV417SL (M108009-06) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	ND	14.4	mg/kg dry	50	AK 101	08/06/01	08/07/01	0108017	
<i>Surr: 4-BFB (FID)</i>	90.2 %	50-150							
01AMHV418SL (M108009-07RE1) Soil						Sampled: 08/05/01 Received: 08/05/01			
Gasoline Range Organics	22.4	22.3	mg/kg dry	50	AK 101	08/09/01	08/09/01	0108017	A-01
<i>Surr: 4-BFB (FID)</i>	86.3 %	50-150							

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) per AK102 and AK103
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMHV412SL (M108009-01) Soil					Sampled: 08/05/01 Received: 08/05/01				
Residual Range Organics	ND	267	mg/kg dry	1	AK102/103	08/07/01	08/08/01	0108018	
Diesel Range Organics	ND	133	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	111 %	50-150							
Surr: Triacontane	109 %	50-150							
01AMHV413SL (M108009-02) Soil					Sampled: 08/05/01 Received: 08/05/01				
Residual Range Organics	ND	263	mg/kg dry	1	AK102/103	08/07/01	08/08/01	0108018	
Diesel Range Organics	ND	132	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	108 %	50-150							
Surr: Triacontane	113 %	50-150							
01AMHV414SL (M108009-03) Soil					Sampled: 08/05/01 Received: 08/05/01				
Residual Range Organics	ND	270	mg/kg dry	1	AK102/103	08/07/01	08/08/01	0108018	
Diesel Range Organics	ND	135	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	101 %	50-150							
Surr: Triacontane	91.2 %	50-150							
01AMHV415SL (M108009-04) Soil					Sampled: 08/05/01 Received: 08/05/01				
Residual Range Organics	ND	265	mg/kg dry	1	AK102/103	08/07/01	08/08/01	0108018	
Diesel Range Organics	ND	133	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	76.4 %	50-150							
Surr: Triacontane	84.4 %	50-150							
01AMHV416SL (M108009-05) Soil					Sampled: 08/05/01 Received: 08/05/01				
Residual Range Organics	ND	263	mg/kg dry	1	AK102/103	08/07/01	08/08/01	0108018	
Diesel Range Organics	ND	132	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	120 %	50-150							
Surr: Triacontane	113 %	50-150							

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) per AK102 and AK103
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMHV417SL (M108009-06) Soil						Sampled: 08/05/01 Received: 08/05/01			
Residual Range Organics	ND	259	mg/kg dry	1	AK102/103	08/07/01	08/08/01	0108018	
Diesel Range Organics	742	130	"	"	"	"	"	"	
<i>Surr: 1-Chlorooctadecane</i>	<i>119 %</i>	<i>50-150</i>							
<i>Surr: Triacontane</i>	<i>136 %</i>	<i>50-150</i>							

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

BTEX, MTBE and Naphthalene per EPA Method 8021B
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMHV412SL (M108009-01) Soil					Sampled: 08/05/01 Received: 08/05/01				
Benzene	ND	0.0790	mg/kg dry	50	1B BTEX/MTI	08/06/01	08/06/01	0108017	
Toluene	ND	0.316	"	"	"	"	"	"	
Ethylbenzene	ND	0.316	"	"	"	"	"	"	
Xylenes (total)	ND	0.632	"	"	"	"	"	"	
Naphthalene	ND	3.16	"	"	"	"	"	"	
Surr: 4-BFB	86.2 %	50-150							
01AMHV413SL (M108009-02) Soil					Sampled: 08/05/01 Received: 08/05/01				
Benzene	ND	0.0807	mg/kg dry	50	1B BTEX/MTI	08/06/01	08/06/01	0108017	
Toluene	ND	0.323	"	"	"	"	"	"	
Ethylbenzene	ND	0.323	"	"	"	"	"	"	
Xylenes (total)	ND	0.646	"	"	"	"	"	"	
Naphthalene	ND	3.23	"	"	"	"	"	"	
Surr: 4-BFB	86.2 %	50-150							
01AMHV414SL (M108009-03) Soil					Sampled: 08/05/01 Received: 08/05/01				
Benzene	ND	0.0885	mg/kg dry	50	1B BTEX/MTI	08/06/01	08/06/01	0108017	
Toluene	ND	0.354	"	"	"	"	"	"	
Ethylbenzene	ND	0.354	"	"	"	"	"	"	
Xylenes (total)	ND	0.708	"	"	"	"	"	"	
Naphthalene	ND	3.54	"	"	"	"	"	"	
Surr: 4-BFB	88.3 %	50-150							
01AMHV415SL (M108009-04) Soil					Sampled: 08/05/01 Received: 08/05/01				
Benzene	0.0495	0.0425	mg/kg dry	50	1B BTEX/MTI	08/06/01	08/06/01	0108017	
Toluene	ND	0.170	"	"	"	"	"	"	
Ethylbenzene	ND	0.170	"	"	"	"	"	"	
Xylenes (total)	ND	0.340	"	"	"	"	"	"	
Naphthalene	ND	1.70	"	"	"	"	"	"	
Surr: 4-BFB	86.4 %	50-150							

North Creek Analytical - Mobile Lab

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Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

BTEX, MTBE and Naphthalene per EPA Method 8021B
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
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01AMHV416SL (M108009-05) Soil

Sampled: 08/05/01 Received: 08/05/01

Benzene	ND	0.0681	mg/kg dry	50	1B BTEX/MTI	08/06/01	08/06/01	0108017	
Toluene	ND	0.273	"	"	"	"	"	"	
Ethylbenzene	ND	0.273	"	"	"	"	"	"	
Xylenes (total)	ND	0.545	"	"	"	"	"	"	
Naphthalene	ND	2.73	"	"	"	"	"	"	

Surr: 4-BFB 88.7 % 50-150

01AMHV417SL (M108009-06) Soil

Sampled: 08/05/01 Received: 08/05/01

Benzene	ND	0.0901	mg/kg dry	50	1B BTEX/MTI	08/06/01	08/07/01	0108017	
Toluene	ND	0.360	"	"	"	"	"	"	
Ethylbenzene	ND	0.360	"	"	"	"	"	"	
Xylenes (total)	ND	0.721	"	"	"	"	"	"	
Naphthalene	ND	3.60	"	"	"	"	"	"	

Surr: 4-BFB 87.6 % 50-150

01AMHV418SL (M108009-07RE1) Soil

Sampled: 08/05/01 Received: 08/05/01

Benzene	ND	0.139	mg/kg dry	50	1B BTEX/MTI	08/09/01	08/09/01	0108017	
Toluene	ND	0.556	"	"	"	"	"	"	
Ethylbenzene	ND	0.556	"	"	"	"	"	"	
Xylenes (total)	ND	1.11	"	"	"	"	"	"	
Naphthalene	ND	5.56	"	"	"	"	"	"	

Surr: 4-BFB 83.5 % 50-150

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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Reported:
08/13/01 16:44

Physical Parameters per APHA/ASTM/EPA Methods
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMHV412SL (M108009-01) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	99.2	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	
01AMHV413SL (M108009-02) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	99.4	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	
01AMHV414SL (M108009-03) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	98.8	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	
01AMHV415SL (M108009-04) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	99.7	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	
01AMHV416SL (M108009-05) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	98.9	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	
01AMHV417SL (M108009-06) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	99.2	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	
01AMHV418SL (M108009-07) Soil					Sampled: 08/05/01 Received: 08/05/01				
% Solids	100	0.0100 % by Weight		1	Gravimetric	08/07/01	08/08/01	0108019	

North Creek Analytical - Mobile Lab

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Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

Gasoline Range Organics (n-Hexane to <n-Decane) per AK101 - Quality Control

North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 0108017 - MeOH Extraction

Blank (0108017-BLK1)

Prepared & Analyzed: 08/06/01

Gasoline Range Organics ND 4.00 mg/kg wet

Surr: 4-BFB (FID) 2.26 " 2.50 90.4 50-150

LCS (0108017-BS2)

Prepared & Analyzed: 08/06/01

Gasoline Range Organics 26.9 4.00 mg/kg wet 25.0 108 50-150

Surr: 4-BFB (FID) 9.06 " 10.0 90.6 50-150

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Project: Amchitka
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Reported:
08/13/01 16:44

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) per AK102 and AK103 - Quality Control

North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 0108018 - 3545 ASE

Blank (0108018-BLK1)

Prepared: 08/07/01 Analyzed: 08/08/01

Residual Range Organics	ND	270	mg/kg wet						
Diesel Range Organics	ND	135	"						
Surr: 1-Chlorooctadecane	27.6		"	23.7		116	50-150		
Surr: Triacontane	26.3		"	23.5		112	50-150		

LCS (0108018-BS1)

Prepared: 08/07/01 Analyzed: 08/08/01

Diesel Range Organics	1440	135	mg/kg wet	1250		115	75-125		
Surr: 1-Chlorooctadecane	29.6		"	23.7		125	50-150		
Surr: Triacontane	29.2		"	23.5		124	50-150		

LCS (0108018-BS2)

Prepared: 08/07/01 Analyzed: 08/08/01

Residual Range Organics	612	270	mg/kg wet	625		97.9	60-120		
Surr: 1-Chlorooctadecane	26.3		"	23.7		111	50-150		
Surr: Triacontane	31.6		"	23.5		134	50-150		

LCS Dup (0108018-BSD1)

Prepared: 08/07/01 Analyzed: 08/08/01

Diesel Range Organics	1460	135	mg/kg wet	1250		117	75-125	1.38	20
Surr: 1-Chlorooctadecane	30.9		"	23.7		130	50-150		
Surr: Triacontane	29.8		"	23.5		127	50-150		

LCS Dup (0108018-BSD2)

Prepared: 08/07/01 Analyzed: 08/08/01

Residual Range Organics	621	270	mg/kg wet	625		99.4	60-120	1.46	25
Surr: 1-Chlorooctadecane	26.5		"	23.7		112	50-150		
Surr: Triacontane	32.6		"	23.5		139	50-150		

Matrix Spike (0108018-MS1)

Source: M108009-01

Prepared: 08/07/01 Analyzed: 08/08/01

Diesel Range Organics	1050	129	mg/kg dry	1200	ND	87.5	0-200		
Surr: 1-Chlorooctadecane	23.5		"	22.8		103	50-150		
Surr: Triacontane	20.8		"	22.6		92.0	50-150		

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.
Environmental Laboratory Network



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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/13/01 16:44

BTEX, MTBE and Naphthalene per EPA Method 8021B - Quality Control

North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 0108017 - MeOH Extraction

Blank (0108017-BLK1)

Prepared & Analyzed: 08/06/01

Benzene	ND	0.0250	mg/kg wet
Toluene	ND	0.100	"
Ethylbenzene	ND	0.100	"
Xylenes (total)	ND	0.200	"
Naphthalene	ND	1.00	"

Surr: 4-BFB 2.21 " 2.50 88.4 50-150

LCS (0108017-BS1)

Prepared & Analyzed: 08/06/01

Benzene	1.94	0.0250	mg/kg wet	2.50	77.6	69-138
Toluene	2.05	0.100	"	2.50	82.0	53-151
Ethylbenzene	2.06	0.100	"	2.50	82.4	61-141
Xylenes (total)	6.25	0.200	"	7.50	83.3	62-141
Naphthalene	2.84	1.00	"	2.50	114	65-135

Surr: 4-BFB 2.30 " 2.50 92.0 50-150

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Reported:
08/13/01 16:44

Notes and Definitions

A-01 The hydrocarbon concentration in this sample is predominately due to an individual peak eluting in the gasoline carbon range.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.

wet Sample results reported on a wet weight basis (as received)

RPD Relative Percent Difference

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Environmental Laboratory Network

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Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			Report recreated from: \\sisters\elmnt\Report\M108009 FINAL 08 13 01 1644.mdb
0108017-BLK1	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
0108017-BS2	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
0108018-BLK1	AK102/103	Residual Range Organics	Additional analyte reported
0108018-BS2	AK102/103	Residual Range Organics	Additional analyte reported
0108018-BSD2	AK102/103	Residual Range Organics	Additional analyte reported
M108009-01	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-01	AK102/103	Residual Range Organics	Additional analyte reported
M108009-02	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-02	AK102/103	Residual Range Organics	Additional analyte reported
M108009-03	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-03	AK102/103	Residual Range Organics	Additional analyte reported
M108009-04	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-04	AK102/103	Residual Range Organics	Additional analyte reported
M108009-05	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-05	AK102/103	Residual Range Organics	Additional analyte reported
M108009-06	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-06	AK102/103	Residual Range Organics	Additional analyte reported
M108009-07RE1	AK101 (GRO)	Gasoline Range Organics	Additional analyte reported
M108009-07RE1	AK101 (GRO)	Gasoline Range Organics	A-01